

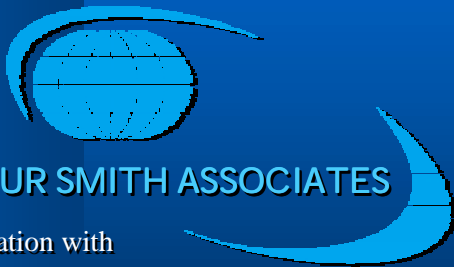


**The Louisiana Department of Transportation
and Development**

Toll Highway Financing and Operations Seminar

Baton Rouge, Louisiana

Presented By



WILBUR SMITH ASSOCIATES

In association with

SALOMON SMITH BARNEY

March 14, 2001

Participants



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Objective of Seminar

- **Generally Familiarize Participants With the Toll Road Option for Infrastructure Development / Implementation**
 - **Construction**
 - **Finance**
 - **Maintenance**
 - **Operation**

How Will We Satisfy This Objective?

- **Financing Alternatives**

- **Required Studies and Their Components**

- Traffic and Revenue
 - Cost and Design
 - Economic Reality
 - Legal Considerations

- **Risks Associated With Tolling Option**

- Traffic
 - Construction
 - Operations

- **Funding Mechanisms**

- Revenue Bonds
 - SIB
 - DOT Participation

- **Case Studies**

- Successful Project Financings

- **Transportation Infrastructure Finance and Innovation Act (TIFIA)**

- Overview
 - Case Studies

- **Rating Agencies**

How Will We Satisfy This Objective?

■ Toll Highways

- **History and Overview of North Texas Tollway Authority**
 - Dallas North Tollway
 - Mountain Creek Lake Bridge
 - President George Bush Turnpike
- **Operational Considerations**
 - TollTags®
- **New Construction**
 - President George Bush Turnpike
- **Future Projects**
 - Capital Planning Model

How Will We Satisfy This Objective?

- **Developing System of Toll Highways**
 - **Texas Turnpike Authority**
 - **Planning Process**
 - ▶ **New Facilities**
 - **Partnerships**
 - **TIFIA Application**
 - ▶ **Use of Funds**
 - **Future Goals**

How Will We Satisfy This Objective?

- **Discuss Initial Steps in Project Evaluation**
 - **Preliminary Assessment / Feasibility Study**
 - **Financing Alternatives**
- **Discuss “Investment Grade” Traffic and Revenue Study**
 - **Detailed Original Data**
 - **Modeling / Network Development**
 - **Long Term Projections**

How Will We Satisfy This Objective?

- **“The Big Picture” IBTTA**
 - **“There are no free roads”**
 - Function
 - Goals
 - **Opportunities to Use the Toll Option**
 - Within United States
 - Throughout the World
 - **What Are Others Doing?**
 - Public Private Partnerships
 - The Word “Toll”
 - **Other Issues**

Questions and Answers



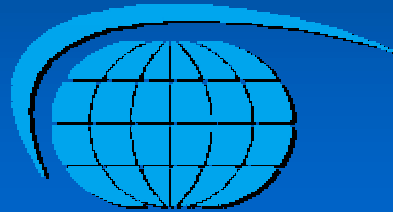
Financing Alternatives

SALOMON SMITH BARNEY

Ronald Marino
Director Public Finance

Study Types

Preliminary Assessment / Feasibility Study



WILBUR SMITH ASSOCIATES

Raymond Richard
Senior Associate

Typical Studies Performed

- **Exploratory Feasibility Assessments**
- **Preliminary Traffic and Toll Revenue / Feasibility Studies**
- **Comprehensive Traffic and Revenue Studies**
- **Toll Equipment / Electronic Toll Collection System Design**
- **Annual Retainer Services**
- **Other**
 - **Toll Sensitivity / Rate**
 - **Toll Plaza Operations**
 - **New Interchange / Improvements**

Exploratory Feasibility Assessment

- **Intended to Determine If More Detailed Studies May Be Warranted**
- **Use Readily Available Existing Data to Develop Broad Estimates of Project's Traffic and Toll Potential**
- **Information Typically Used Includes:**
 - **Traffic Trend Data**
 - **Socioeconomic Data**
 - **Prior Studies**

Preliminary Traffic and Revenue / Feasibility Study

- **More Detailed Than Exploratory Assessment – Additional Data Requirements**
- **Use Readily Available Socioeconomic Data in Analysis**
- **Development of Preliminary Estimates of Facilities Traffic and Toll Revenue Producing Ability – Not to Level of Detail to Be Used in Financing Project**
- **Can Include:**
 - **Use of Available Traffic Models and Supporting Data**
 - **Toll Sensitivity Analyses**
 - **Development of Capital, and Maintenance and Operating Cost for the Facility**
 - **Preliminary Estimation of Debt Service Requirements / Financial Feasibility of Project**

Comprehensive Traffic and Revenue Study

- Most Detailed Type of Traffic and Revenue Study
- Can Be Used in Project Financing – Includes Certification of Numbers
- Typical Components of Study Include:
 - **Field Studies / Motorist Surveys**
 - **Corridor Growth Analysis:**
 - Economic Evaluation
 - Socioeconomic Trends and Projections
 - Special Traffic Generators
 - Energy Considerations
 - Economic Impact Analysis
 - **Computer Modeling:**
 - Often Use Regional Model Developed by Planning Agency
 - Modify Model As Necessary
 - Run Traffic Assignments With Proposed Project
 - **Develop Estimates of Long-term Traffic and Toll Revenue Potential for Proposed Facility**
 - **Preparation of Study Report Suitable for Use in Project Financing**
 - **Attendance at Review Sessions and Rating Agency Meetings**
 - **Study May Also Include:**
 - Traffic Impact Analysis
 - Level of Service / Capacity Analysis
 - Development of Toll Sensitivity Curves
 - Assessment of Toll Collection Options

Toll Equipment / ETC System Design

- **ETC Feasibility / Cost Effectiveness Studies**
 - **Identify ETC Market Potential Shift to ETC**
 - **Evaluate ETC Program Parameters**
 - **Discount Rates**
 - **Develop System Concepts**
 - **Assess Benefits to Users and Toll Agency**
 - **Reduced Congestion**
 - **Improved Air Quality**
- **Toll System Functional Design**
 - **Develop Detailed System Concept**
 - **Prepare Functional Plans and Specifications**
 - **Evaluate Competitive Proposals**
 - **Help in Selecting Equipment Suppliers**
- **Contract Monitoring**
 - **Routine Contract Administration**
 - **Shop Testing and Evaluation**
 - **Coordination Between Contractors and Factory Demonstrations**

Annual Retainer Services

- **Provide Assistance to Agency Toll Facility Is Opened**
 - **Operational**
 - **Budgetary**
 - **Additional Facilities**
 - **Refinancing**
- **Help Meet Contractual Requirements of Traffic Engineer**
 - **Toll Covenants**
- **Typical Retainer Duties Can Include:**
 - **Continuous Monitoring of Traffic and Revenue Experience on Facility**
 - **Certificates of the Traffic Engineer – U & O Insurance**
 - **Annual Toll Revenue Forecasts for Budgetary Purposes**
 - **Annual Traffic Engineer Reports**
 - **Toll Collection Studies**
 - **Traffic Operations Studies**
 - **Participation in Agency Board Meetings**
 - **Review / Critique Competitive Proposals**

Other Types of Studies

- **Toll Rate / Toll Sensitivity Studies**
- **Discount Commuter Program Analyses**
- **Toll Plaza Operations Studies**
- **New Interchange Feasibility Studies**
- **Service Area / Concession Analyses**

Data Collection

- **Comprehensive Route Reconnaissance**
- **Review Previous and Ongoing Studies**
- **Obtain Available Traffic Count Data**
- **Review Current Construction Costs**
- **Review Neighboring Toll Facility's O&M Costs**
- **Review Adjacent States Per Mile Toll Rates**

Assignment Process

Skeletal Forecast Model

- Manual Diversion Process
- Define Project Configuration
- Develop Base Year Skeleton Network
- Base Year 1999 Corridor Demand

Traffic Simulation Model

- Demand Forecast Model
 - Define Project Configuration
 - Develop Base Year Hwy. Network
 - Calibration / Validation Model Assignments
 - Base Year Corridor Demand
-
- Develop Toll Collection Concepts
 - Determine Toll Rates
 - VOT / VOC
 - Traffic Diversions (Toll Free Assignment)
 - Preliminary Toll Sensitivity
 - Base Toll Rate
 - Calculate Base Year Traffic (Toll Assignment)

Operations and Maintenance (O&M)

- **Toll Collection – Cost of Fare Collection**
- **Roadway Maintenance – Cost of System Upkeep**
- **Administration – Cost of System Management**
- **Annual Costs**
- **Existing Systems**
- **System Factors**
 - **Mileage**
 - **Number of Booths**
- **Cost Inflation**

Construction Cost Estimates

- **Development Plans**
- **Utilize Available Data**
- **Review Current Construction Costs**
- **Toll System Concepts**
- **Methodology**
 - **Current Year**
 - **Unit Costs**
 - **Toll Implementation**

Overview

International Bridge, Tunnel and Turnpike Association

Neil Schuster
Executive Director